

Work Order ID 141126

Tuesday, January 26, 2016 1:50:30 PM

141126

Page 1

Item ID: D2011-101

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Mirror 6"

Start Date: 1/26/2016 Start Qty: 12.00

12

Cust Item ID:

Required Date: 2/2/2016 Req'd Qty: 12.00

12

Customer:

Reference:

Approvals: Process Plan: MCS

Date: JAN 26 2016

Tooling:

Date:

Run Start ***NR1***

QC:

Date:

SPC (Y/N):

Date:

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D2011	Rev G								
100	PURCHASING	0.00							DAS 13 9-89
100									
Purchasing	Memo	0.00							
Purchasing	Issue P/O: 31172 Mirror P/N: 28663 supplier: B C INDUSTRIAL Material release note required								
110	Receive & Inspect for Damage & Mat'l Certs	0.00							
110									
Packaging	Memo	0.00							DAS 6 9-89
Packaging	Ensure material certification is attached								
120	QC6- Inspect dimensions to drawing	0.00							
120									
QC	Memo	0.00							DAS 38 9-89
Quality Control									

JAN 28 2016

FEB 05 2016

FEB 08 2016

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :				MRB (QSI042) Approval	
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐				
		OTHER : ☐							

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Page 2

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Start Date: 1/26/2016 Start Qty: 12.00 ***12***

Cust Item ID:

Required Date: 2/2/2016 Req'd Qty: 12.00 ***12***

Customer:

Reference:

Approvals: Process Plan: Date: Tooling: Date: Run Start ***NR1***
QC: Date: SPC (Y/N): Date: Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

130

0.00

130

Small Fab

0.01

Small Fab

Memo

Small Fab

1- Wrap mirror with plastic wrap

2- Discard Hardware & Install new hardware loosely

3- Crimp stud as per Dwg D2011

140

QC5- Inspect part completeness to step on W/O

0.00

140

QC

Memo

0.00

Quality Control

4- Test assembly to 50lbs pull test after 24 hours

150

Identify as per dwg & Stock Location: 51384 0.00

150

Packaging

Memo

0.00

Packaging

12X

16/02/11

DAS
36
9-89

12

DAS
38
9-89
FEB 11 2016

12
DAS
6
9-89

FEB 11 2016

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

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Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
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☐ Environment	☐ Design	☐ Doc/Data	☐ Equip/Tooling	☐ Handling/Pre	☐ Material	☐ Internal Transport	☐ Tribal Knowledge	☐ LOA	☐ Substation	☐ Past Expiry Date	☐ Misidentified	☐ No Re-verification	☐ Operator	☐ Offset/Setup	☐ Supplier	☐ Training	☐ Use for Testing	☐ Poor Information	☐ Rushing	☐ Product Improvement	☐ Process Improvement	☐ Manufacturing Process	☐ Past Due	☐ Pressure/Forced	☐ Bending	☐ Centre Not Concentric	☐ Cracks	☐ Crimp/Kink/Ripple/Wave	☐ Cuffs	☐ Crushing	☐ Heat Treat	☐ Wave/Twist in Tube	☐ Marks/Chatter	☐ Temperature/Cure	☐ Set-up	☐ BOM/Route	☐ Broken/Damage/Defect	☐ Inspection Incomplete/Unqualified	☐ Contamination	☐ Countersink	☐ Cut Too Short	☐ Instructions Incomplete/Unclear	☐ Drill Holes	☐ Power Loss/Surge	☐ Folio/Program	☐ Grain	☐ Weld	☐ Wrong Stock Pulled	☐ Out of Sequence	☐ Off-set	☐ Mislabeled	☐ Fit/Function	☐ Misaligned/off center	☐ Positioned Wrong	☐ Outside Dimensions	☐ Over/Under tolerance	☐ Part Incorrect	☐ Part Lost/Missing	☐ Part Moved	☐ Drawing	☐ Finish	☐ Misread	☐ Turning Sequence
																								☐ OTHER : _____																																							

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Page 3

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Required Date: 2/2/2016 Req'd Qty: 12.00

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Customer:

Reference:

Approvals: Process Plan:

Date:

Tooling:

Date:

Run Start ***NR1***

QC:

Date:

SPC (Y/N):

Date:

Stop ***NR2***Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
---------	--------	--------------	---------------	---------------	------------------	----------------

160

QC21- Final Inspection - Work Order Release

0.00

160

QC

Memo

0.02

Quality Control

MS

FEB 16 2016

20160212
SLA

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : ☐					

Picklist Print

Tuesday, January 26, 2016 1:50:35 PM

Page 1

Work Order ID: 141126

141126

Parent Item: D2011-101

D2011-101

Parent Item Name: Mirror 6"

Start Date: 1/26/2016

Required Date: 2/2/2016

Start Qty: 12.00

Required Qty: 12.00

Comments: IPP: J04.09.15 Added Steps 5-7 KJ/JLM IPP:
K05.12.15chg black sikaflex for white EC IPP L 08.11.06 new
drawing EC verify: DD IPP: M 08.12.19 Added step 3 KJ Verified
by: LL IPP rev N 10.01.13 added wrap per ncr09-118 EC verified by:DD

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
NAS1149D0416J		Purchased	No			110	Each	4,466.000	1	12			DAS 36 9-89
NAS1149D0416.J													
WASHER													

Location	Loc Qty	Loc Code
GA	300	
m131511	300	
ST260a	1986	
m131511	1986	
ST264	2180	
m131511	2180	

CHM-10601		Purchased	No			130	Each	0.0000	1	12			DAS 6 9-89
CHM-10601													
Mirror 6"													
D2829		Manufactured	No			130	Each	69.0000	1	12			DAS 36 9-89
D2829													
Threaded Stud													

Location	Loc Qty	Loc Code
GA	69	
122346	69	

D3014-1		Manufactured	No			130	Each	194.0000	1	12			DAS 36 9-89
D3014-1													
Lock Nut													

Location	Loc Qty	Loc Code
ST015	194	
122272	194	

DQA: _____ Date: _____



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Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					
Root Cause		FAULT CATEGORY							
Environment ☐	☐ No Re-verification	☐ Pressure/Forced	☐ Temperature/Cure	☐ Power Loss/Surge	☐ Positioned Wrong				
Design ☐	☐ Operator	☐ Bending	☐ Set-up	☐ Folio/Program	☐ Outside Dimensions				
Doc/Data ☐	☐ Offset/Setup	☐ Centre Not Concentric	☐ BOM/Route	☐ Grain	☐ Over/Under tolerance				
Equip/Tooling ☐	☐ Supplier	☐ Cracks	☐ Broken/Damage/Defect	☐ Weld	☐ Part Incorrect				
Handling/Pre ☐	☐ Training	☐ Crimp/Kink/Ripple/Wave	☐ Inspection Incomplete/Unqualified	☐ Wrong Stock Pulled	☐ Part Lost/Missing				
Material ☐	☐ Use for Testing	☐ Cuffs	☐ Contamination	☐ Out of Sequence	☐ Part Moved				
Internal Transport ☐	☐ Poor Information	☐ Crushing	☐ Countersink	☐ Off-set	☐ Drawing				
Tribal Knowledge ☐	☐ Rushing	☐ Heat Treat	☐ Cut Too Short	☐ Mislabeled	☐ Finish				
LOA ☐	☐ Product Improvement	☐ Wave/Twist in Tube	☐ Instructions Incomplete/Unclear	☐ Fit/Function	☐ Misread				
Substation ☐	☐ Process Improvement	☐ Marks/Chatter	☐ Drill Holes	☐ Misaligned/off center	☐ Turning Sequence				
Past Expiry Date ☐	☐ Manufacturing Process								
Misidentified ☐	☐ Past Due	OTHER :							

8

7

6

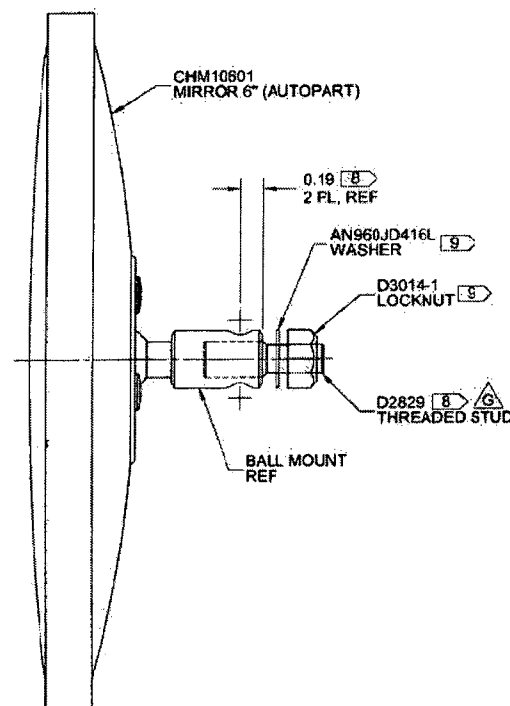
5

4

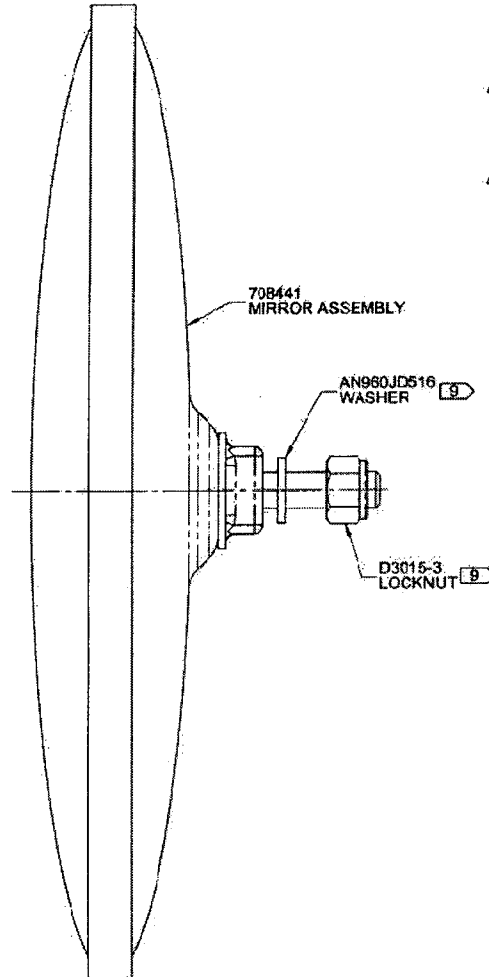
3

2

1

**D2011-101 MIRROR ASSEMBLY 6"****NOTES:**

- 1) MATERIAL: N/A.
- 2) FINISH: N/A.
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: D2011-101 = 0.6 lbs APPROX. ; D2011-103 = 1.0 lbs APPROX.
- 8) D2829 INSTALLATION PROCEDURE:
 - APPLY LOCKTITE 262 TO Ø 5/16 END OF D2829
 - THREAD BY HAND INTO BALL MOUNT UNTIL ENTIRE Ø 5/16 END OF D2829 IS WITHIN BALL MOUNT
 - CRIMP BALL MOUNT ON TWO OPPOSING SIDES, 0.13 FROM END AS ILLUSTRATED USING TOOL DT8317
 - CRIMP TO DEPTH OF 0.040 ± 0.010 USING R0.125
- 9) INSTALL LOOSE

**D2011-103 MIRROR ASSEMBLY 8"**

ITEM	QTY -101	QTY -103	P/N	DESCRIPTION
1	X		D2011-101	MIRROR ASSEMBLY 6"
2		X	D2011-103	MIRROR ASSEMBLY 8"
3	1		D2829	THREADED STUD
4	1		D3014-1	LOCKNUT
5		1	D3015-3	LOCKNUT
6	1		CHM10801	MIRROR 6" (AUTOPART)
7		1	708441	MIRROR 8" (VELVAC)
8	1		AN960JD416L	WASHER
9		1	AN960JD516	WASHER

UNCONTROLLED
 SUBJECT TO CHANGE
 WITHOUT NOTICE
 WORK IN PROGRESS
 NO. 141126 MJS
 160126
RELEASED
 06-10-29

G	REDRAWN IN SOLIDWORKS TO CURRENT STANDARD AND TRANSFERRED TO "B" SIZE FORMAT. MIRROR 6" (AUTOPART) AND CHM10801 WERE MIRROR 6" (GROTE) AND P/N 28043 (ZN D3-1); ADDED D2829 (ZN D3-1) AND ZN D3-1; REMOVED DRILLING NOTE: VIEW A-A AND SIKAFLEX APPLICATION NOTE. REASON: GROTE PRODUCT IS DISCONTINUED	MB	05.10.06
F	ADD HOLES FOR SEALANT ON -101	CP	04.09.10
E	NEW 8" MIRROR	CP	01.05.08
D	NEW 6" MIRROR, ADD NUT, REMOVED STUD	CP	01.04.23
C	REPLACE DOMAINION AUTO MIRRORS WITH PHILLIPS, ADDED STUDS, REDRAWN	RF	99.06.01
B	SIKAFLEX 241 ADDED	JB	98.04.09
A	DWG NO. WAS DSP1011, ADDED -103	JB	90.06.15
-	NEW ISSUE	JB	90.03.31
REV.	DESCRIPTION	BY	DATE
DESIGN	JB	DART AEROSPACE LTD	
DRAWN		HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. G
MFG. APPR.		D2011	SHEET 1 OF 1
APPROVED		TITLE	SCALE
DE APPR.		MIRROR ASSEMBLY	NTS
DATE	08.10.06	COPYRIGHT © 1990 BY DART AEROSPACE LTD.	



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID PO31172

Purchase Order Date 1/28/2016

PO Print Date 1/28/2016

Page Number 1 of 2

Order From :

VC-BCI001

B C INDUSTRIAL
14 OLD FOREST
KIRKLAND, QUEBEC H9J 2Z8

Ship To : DART AEROSPACE LTD
1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

E-MAILED
JAN 28 2016

Contact Name

Vendor Phone 514-585-8907

Buyer

Chantal Lavoie

Customer POID

Customer Tax # 10127-2607

Terms Net 30

Currency CAD

FOB FCA - (Free Carrier)

Ship To Contact

Ship To Phone

Ship Via: FedEx Economy collect

Ship Acct:

Line Nbr	Reference Vendor Part Number Line Comments Delivery Comments	Description/ Mfg ID	Req Date/ Taxable Promise Date	CD	Req Qty/ Unit of Measure	PO Unit Price	Extended Price
1	658-065 AS PER DWG D 3904 REV. B B14152	Washer	2/4/2016 Yes 2/4/2016		100.00 Each	\$0.49	\$49.00
Line Total:							\$49.00
2	28663 AS PER DWG D2011 REV. G B141126	Mirror 6"	2/4/2016 Yes 2/4/2016	FN	12.00 Each	\$18.70	\$224.40
Line Total:							\$224.40

Note:

1/28/2016



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID **PO31172**

Purchase Order Date 1/28/2016

PO Print Date 1/28/2016

Page Number 2 of 2

Order From :

VC-BC1001

B C INDUSTRIAL
14 OLD FOREST
KIRKLAND, QUEBEC H9J 2Z8

Ship To : DART AEROSPACE LTD
1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

Contact Name

Vendor Phone 514-585-8907

Ship To Contact

Ship To Phone

Ship Via: FedEx Economy collect

Ship Acct:

Buyer

Chantal Lavoie

Customer POID

Customer Tax # 10127-2607

Terms

Net 30

Currency

CAD

FOB

FCA - (Free Carrier)

3	71401-45	PROCUREMENT QUALITY CLAUSES	2/4/2016	1.00	\$0.00	\$0.00
---	----------	--------------------------------	----------	------	--------	--------

No

Procurement Quality Clauses

2/4/2016

A005 RIGHT OF ENTRY
A026 CERTIFICATION OF MATERIAL CONFORMANCE
A040 NOTIFICATION OF QUALITY ESCAPE
A042 DART NOTIFICATION BY SUPPLIER
A043 RETENTION OF QUALITY DOCUMENTS

Line Total: \$0.00

PO Total: \$273.40

Note: Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit www.dartaerospace.com for further explanation.

Change Nbr: 1

Change Date: 1/28/2016

BC Industrial..... 14 Old Forest....Kirkland....Quebec....H9J-2Z8....Canada
Phone 514-585-8907 Email bcpc1@videotron.ca

Certificate of Compliance

Feb 4 2016

Dart Aerospace
1270 Aberdeen
Hawkesbury, Quebec
K6A-1K7

ATT: Chantal Lavoie

This is to confirm that the parts delivered on our PS 160204DA

Grote mirror 28663
Washers 658-065

conforms to the specifications outlined on your purchase
order 31172

Thank you



Bryan Cameron

#TPS/GST-142640622
#TVQ/PST-1021696907

Terms 2%10 Net 30

DATE Feb 4 2016

Packing Slip

PS160204DA

Livrer a/Ship to:

Dart Aerospace
1270 Aberdeen Street
Hawkesbury, Ont
K6A 1K7

PO 31172

	Description	Livrer/ship	B/O
1.	washers 658-065	100 /	0
2.	mirrors 28663	12 /	0
3.		16/2/3	
4.		SD	
5.			
6.			
7.			

BC Industrial..14 Old Forest..Kirkland..Quebec..H9J-2Z8

Phone 514-585-8907 bcpcl@videotron.ca

BC Industrial..... 14 Old Forest....Kirkland....Quebec....H9J-2Z8....Canada
Phone 514-585-8907 Email bcpc1@videotron.ca

FACTURE/INVOICE

INV160204DA

Feb 4 2016

Ref Notre PS# PS160204DA

Votre PO# 31172

Vendu a Dart Aerospace Ltd
1270 Aberdeen
Hawkesbury, Ont
K6A 1K7

	Description	Quan.	Prix	Total
1.	washers 658-065	100	.49ea	49.00
2.	mirrors 28663	12	18.70ea	224.40
3.				
4.				
5.				

273.40

HST: 35.94

308.94

#TPS/GST-142640622

#TVQ/PST-1021696907

Terms 2%10 Net 30